
New Species of *Justicia* (Acanthaceae) from Cerro La Chapa, El Amparo, Venezuela

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ABSTRACT. Current research in the cloud forest of Cerro La Chapa, El Amparo, by Winfried Meier has resulted in the recognition of a new species of *Justicia*. This new species, *Justicia chapana*, previously misidentified as *J. galapagana* Lindau, is described, illustrated, and compared to the latter, its closest relative, from the Galápagos Islands.

Justicia is the largest and taxonomically most complex genus of Acanthaceae, with ca. 600 species worldwide (Graham, 1988; Mabberley, 1997). It is also the largest genus of the family in Venezuela, with about 45 species found there. The genus is characterized by the upper corolla lip rugulate, androecium of two 2-thecous stamens and no staminodes, 2- or 3-aperturate pollen with a trema area usually traversed by 2–8 rows of up to 10 insulae (Fig. 2), and stipitate capsules with four (or fewer) seeds.

Justicia chapana Wasshausen, sp. nov. TYPE: Venezuela. Yaracuy: El Amparo, 7 km N of Salom, 110–1200 m, 1 Dec. 1974, *J. Steyermark*, *Carreño Espinoza*, *C. Steyermark* & *Diederichs 111211* (holotype, US; isotype, VEN). Figures 1, 2.

Herba, caulibus quadrangularibus, puberulis et glanduloso-pilosis. Foliorum lamina lanceolata vel parce ovata, membranacea, utrinque parce puberula, costa et venis lateralibus puberulis, acuminata, basi attenuata. Inflorescentiae pauciflorae, axillares, dichotomae, folia aequantes, apice spiciformes, flores in axillis bractearum alternantibus, glanduloso-pilosi; bracteae bracteolaeque subulatae; calycis segmenta 4, lance-subulata; corolla lavendulacea vel profunde atrorosea-purpurea, 6–7 mm longa, pilosa, tubo 3–4 mm longo, labio superiore anguste ovato, apice cuculato et rotundato; stamina exserta; lobis antherarum leviter superpositis.

Branching herb 0.5 m tall. Stems ascending, quadrangular-ridged, conspicuously puberulous and glandular-pilose, trichomes erect, gland-tipped, others \pm spreading. Leaves petiolate, petioles 10–15 mm long, pubescence similar to that of stem, blades lanceolate to narrowly ovate, 5–7.5 \times 2–3.3 cm, membranous, dull green, sparingly and

inconspicuously puberulent both above and below, especially on costa and lateral veins, trichomes erect or appressed, eglandular or glandular, cystoliths usually obscure, apex long-acuminate, base attenuate, margin entire to obscurely crenulate; leaves subtending inflorescence much reduced, narrower than cauline leaves. Inflorescence few-flowered, axillary, dichotomously branched spikes, these barely exceeding terminal leaves, densely glandular-pilose, trichomes interspersed both glandular and eglandular. Flowers alternate, pedicels almost none; bracts and bracteoles subulate, 3–3.5 \times 0.5 mm, pubescence intermixed pilose and glandular-pilose; calyx 4.5–5.5 mm long, deeply 4-parted, lobes lance-subulate, 3–4.5 \times 0.75–1 mm, pubescence similar to that of the bracts and bracteoles; corolla rich lavender to deep rose-purple, 6–7 mm long, externally moderately pilose, tube 3–4 mm long, basally 1.2–1.5 mm wide, throat 2.5–3 mm wide, upper lip narrowly ovate, 3–4 mm long, basally 4 mm wide, apically cucullate and rounded, folded longitudinally inside, lower lip 3-lobed, lobes narrowly ovate to elliptic, 1.5–2 mm long, 1.5 mm wide, undulate at tip; stamens exserted; filaments slender, flattened, 2 mm long, glabrous, anther thecae obliquely attached to a flattened connective, upper thecae obtuse, 1 mm long, lower thecae 1 mm long, apiculate at base; pollen grains 2-porate, bilateral, 50 \times 30 μ m, trema area microreticulate, traversed by 2 rows peninsulae (Fig. 2); ovary pubescent, brownish, style filiform, 5 mm long, pubescent, stigma oblique. Capsule 4-seeded, clavate, 13–14 \times 3–3.5 \times 3 mm, seed-bearing-portion brownish, densely pilose, trichomes both eglandular and glandular; retinacula 2 mm long, slightly curved; seeds suborbicular, 1.5 mm diam., densely pubescent with glochidiate trichomes.

Distribution. Endemic to Venezuela; plants occur in cloud forests and along upper slopes of rivers, in the departments of Carabobo, Yaracuy, Cojedes, Lara, Portuguesa, and Trujillo at elevations from 700 to 2300 m.

Justicia chapana superficially resembles *J. gal-*

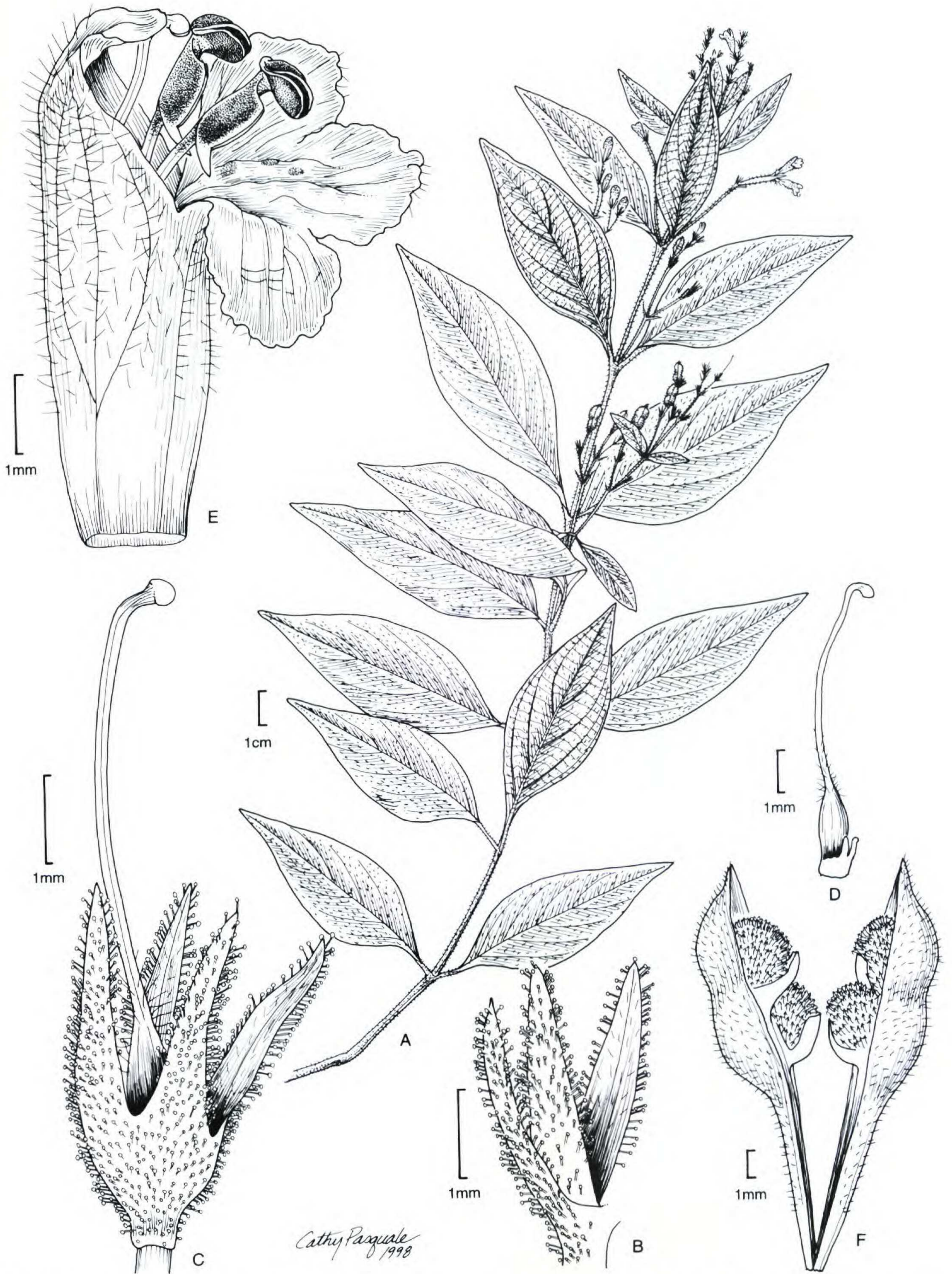


Figure 1. A–F. *Justicia chapana* Wasshausen (Steyermark et al. 111211). —A. Habit. —B. Bract and bracteoles. —C. Calyx and pistil. —D. Pistil, ovary, cupula, and glands. —E. Corolla, stamens, and pistil. —F. Capsule, retinacula, and seeds.

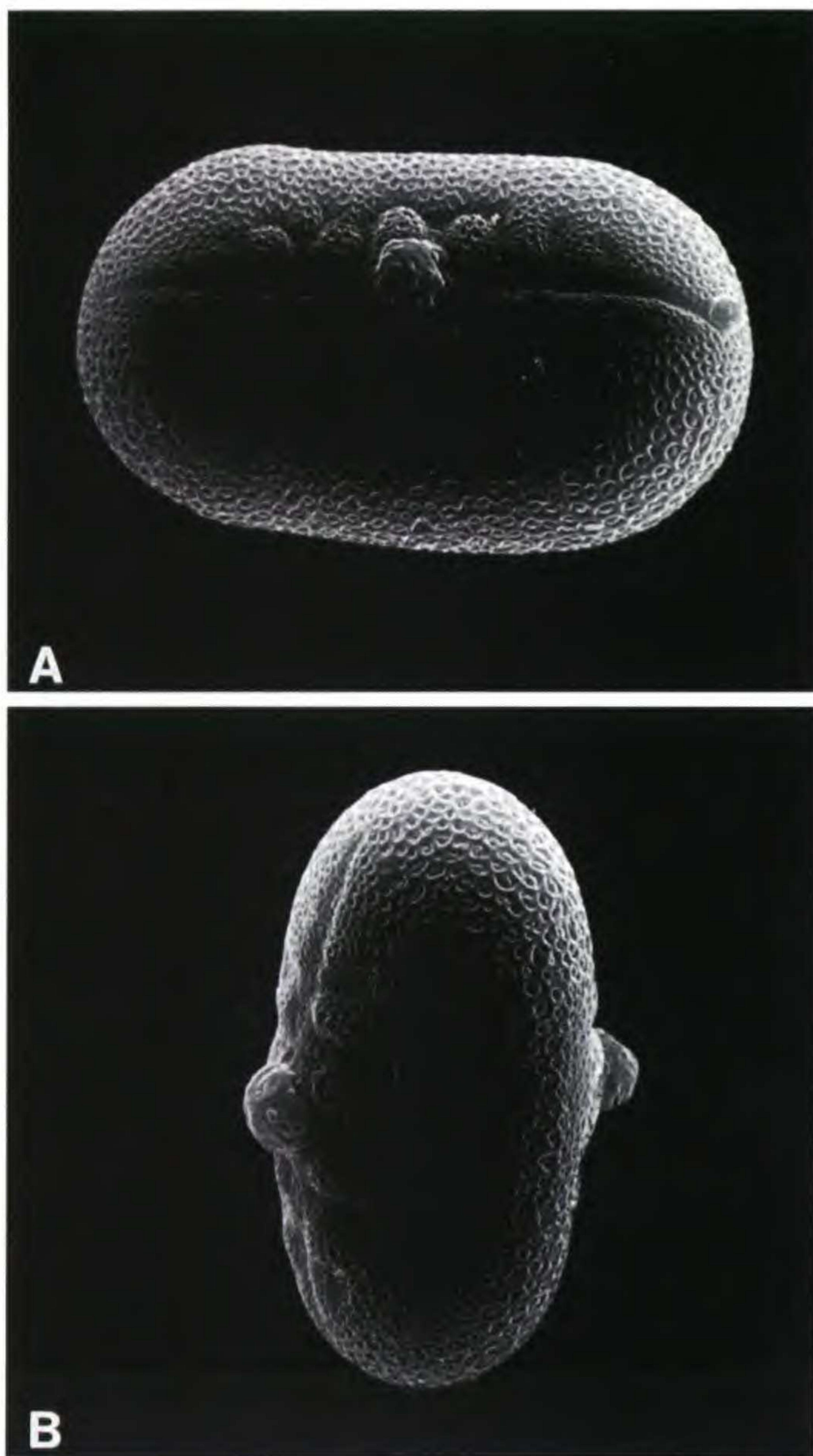


Figure 2. Scanning electron (SEM) photomicrographs of *Justicia chapana* pollen. A, B. *J. chapana* (Steyermark & Bunting 105258). —A. Equatorial view, $\times 1145$. —B. Equatorial view, $\times 1215$.

apagana Lindau from the Galápagos Islands; in fact, J. Steyermark identified his Venezuelan specimens as *J. galapagana*. In *J. galapagana* the corollas are considerably larger, 10–14 mm long, purple, the tube is 4–6 mm long, the upper lip is apically somewhat dentate, the middle lobe of the

lower lip is distinctly masked with maroon nectar guides, and the leaf blades are basally abruptly narrowed. By contrast, in *J. chapana* the corollas are 6–7 mm long, rich lavender to deep rose-purple, the tube is 3–4 mm long, the upper lip is apically cucullate and rounded, the middle lobe of the lower lip is not reported to have maroon markings, and the leaf blades are basally attenuate. The new species is placed in Graham's (1988) section *Sarotheca*, which is characterized by its compound spicate inflorescence with a glandular axis, and by its type 6 pollen.

Paratypes. VENEZUELA. **Carabobo:** road to Tinaquillo, Pittier 11986 (US). **Yaracuy:** Cerro La Chapa, selva nublada al norte de Nirgua, 1200–1400 m, Steyermark, Bunting & Wessels-Boer 100289 (US, VEN), Steyermark & Bunting 105258 (US, VEN); selva nublada en la fila y las laderas superiores, entre Salom y Temerica, 100 m, Steyermark, Bunting & Wessels-Boer 100359 (US, VEN); 7.5 km N of Salom, 10°15'N, 68°29'W, 1200–1300 m, Liesner & Steyermark 12406 (MO, US); Quebrada Honda, 17.3 km del pueblo de Arva, 1100 m, Steyermark 105411 (US, VEN). **Cojedes:** Dto. San Carlos, Mun. Rómulo Gallegos, Llamozas 147 (US). **Lara:** Dto. Moran, between Humocaro Alto and La Mesa, 1100 m, Steyermark & Carreño Espinoza 111039 (US, VEN). **Portuguesa:** Dto. Sucre, la carretera Gavilán–Mijagual–Mesa de Bucaral, 15 km S-SE of Biscucuy, 700 m, Aymard *et al.* 3695 (PORT, US); Dto. Guanare, along Río Guanare, above Mijagual, Stergios *et al.* 8758 (PORT, US). **Trujillo:** Dto. Bocono, La Morita, above Río Saguarás, S of Campo Elias and ca. 3 km W of Trujillo-Portuguesa state line, 2300 m, Dorr *et al.* 5381 (NY, US).

Acknowledgments. My special thanks to Cathy Pasquale for skillfully preparing the line drawing, and to the staff of the National Museum of Natural History SEM Laboratory for their high-quality pollen photomicrographs.

Literature Cited

- Graham, V. A. W. 1988. Delimitation and infra-generic classification of *Justicia* (Acanthaceae). *Kew Bull.* 43: 551–624.
- Mabberley, D. 1997. *The Plant-Book: A Portable Dictionary of the Vascular Plants*. Cambridge Univ. Press, Cambridge.